OL'KHOVOY, L. S.

OL'KHOVOY, L. S. -- "The Effect of Columbium and Zirconium on the Properties of Chrome Steel." Min Higher Education USSR. Moscow Order of Labor Red Banner Inst of Steel imeni I. V. Stalin. Moscow, 1955. (Dissertation for the Degree of Candidate of Technical Sciences.)

SO: Knizhnaya Letopis', No 5, Moscow, Feb 1956

Ol'Khovoy, L.S.

AUTHORS: Vishnyakov, D. Ya., Doctor of Technical Sciences Prof.
and Ol'khovoy, L. S., Candidate of Technical Sciences.
129-9-5/14

TITLE: Pearlitic transformation in chromium steel containing
niobium and zirconium. (Perlitnoye prevrashcheniye v
khromistoy stali, soderzhashchey niobiy i tsirkoniy).

PERIODICAL: "Metallovedeniye i Obrabotka Metallov" (Metallurgy and
Metal Treatment), 1957, No.9, pp.18-21 (U.S.S.R.)

ABSTRACT: The results are described of experiments relating to
isothermal transformation of the austenite of chromium steels
containing niobium and zirconium. The tests were carried out
by preliminary heating to 1000 C and using an Akulov
"anisometer" and a microstructural method and also by preliminary
heating to 1300 C and using solely a microstructural method.
The kinetics of isothermal transformation of the austenite
and the microstructure of its decomposition products proved
analogous for all the investigated alloys. Therefore, the
results are given for only two steels with the following
compositions: 0.35% C, 0.3% Mn, 0.28% Si, 2.15% Cr, 0.25% Nb,
0.007% S , 0.030% P and 0.37% C, 0.51% Mn, 0.25% Si,
2.07% Cr, 0.05% Zr, 0.017% S and 0.016% P.   On the basis
of the results the authors conclude that during isothermal
transformation of super-cooled austenite of chromium steel

Card 1/2

Pearlitic transformation in chromium steel containing
niobium and zirconium. (Cont.)   129-9-5/14

with niobium and zirconium the form of the separated out
pearlite changes in the pearlitic range with increasing
super-cooling below the temperature of the upper bend of
the S-shaped curve and the evolution of acicular pearlite
formations can be observed.   In the upper part of the
intermediate range the isothermal transformation of austenite
into acicular troostite does not proceed fully, a certain
fraction of non-transformed austenite remains which, after a
certain time, becomes transformed into acicular pearlite.
There are 5 figures (graphs and micro-photographs), and
two German references.

AVAILABLE:

Card 2/2

Ol'khovoy, L. S.

137-58-3-5986

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 3, p 219 (USSR)

AUTHORS: Vishnyakov, D. Ya. , Ol'khovoy, L. S.

TITLE: The Effect of Niobium and Zirconium on the Anneal Brittleness of Chromium Steel (Vliyaniye niobiya i tsirkoniya na otpusknuyu khrupkost' khromistoy stali)

PERIODICAL: Sb. Mosk. in-t stali, 1957, Vol 36, pp 131-146

ABSTRACT: An account of an investigation of the effect of Nb(0.25-1.0 percent) and Zr(0.05-0.50 percent) on the anneal brittleness (AB) of Cr steel containing 0.31-0.41 percent C, 0.30-0.51 percent Mn, 0.25-0.42 percent Si, 1.75-2.30 percent Cr, 0.017-0.023 percent S, and 0.013-0.23 percent P. A portion of the steel melts contained 0.37 percent Mo, two melts contained W (0.35 percent and 0.60 percent), and one melt contained 0.18 percent V. Susceptibility to AB was evaluated from the difference in critical temperatures of brittleness (T_{br}) before and after annealing.

After tempering (T) starting at temperatures equivalent to $Ac_3 + (30-50^\circ)$, $Ac_3 + 100^\circ$, and $Ac_3 + 300^\circ$, the specimens were annealed at 620-680°C and were then rendered brittle by heating

Card 1/3

137-58-3-5986

The Effect of Niobium and Zirconium (cont.)

to 500° for a period of 12 hours, followed by cooling in the furnace. Impact tests were conducted at temperatures ranging from -78° to +400°. The highest experimental temperature at which traces of brittle failure began to appear in the fractured region was taken as the T_{br}. It was established, by means of carbide analysis, that Nb begins to change into a solid solution only at T temperatures of 1200° and above. The Nb present in the solid solution reduces the susceptibility of Cr steel to AB and lowers the T_{br}, while the Nb present in the steel in the form of carbides does not appreciably influence the susceptibility of Cr steels to AB and raises the T_{br} considerably. Introducing 0.6 percent W into the steel considerably reduces its susceptibility to AB and lowers the T_{br} at tempering temperatures starting at 1000°; after T at temperatures starting at 1200°, however, the effect of W is considerably less. Adding Mo to steel containing Nb does not eliminate the tendency of steel to AB. Simultaneous presence of Nb, Mo, V, and Cr in the solid solution increases the tendency toward AB. V greatly increases the susceptibility to AB in Cr-Nb-Mo steel. Zr affects the AB in a manner analogous to the effect of Nb. Introduction of Mo into a Cr-Zr steel very substantially reduces the tendency for AB and simultaneously lowers the T_{br}. Steels with greater tendency for AB are characterized by greater susceptibility to etching of grain boundaries. The AB is not as much determined by the total amount of elements present in the steel as by the content of these elements in a layer Card 2/3

137-58-3-5986

The Effect of Niobium and Zirconium (cont.)

disposed on the grain boundaries where the processes responsible for the AB occur.

M. Sh.

Card 3/3

VISHNYAKOV, D.Ya., doktor tekhn.nauk; OL'KHOVOY, L.S., kand.tekhn.nauk

Isothermal transformation of undercooled austenite in chromium steel containing niobium and zirconium. Sbor.Inst.stali no.39:325-326 '60.   (MIRA 13:7)

1. Kafedra metallovedeniya i termicheskoy obrabotki Moskovskogo ordena Trudovogo Krasnogo Znameni instituta stali im. I.V. Stalina.
        (Chromium steel—Metallography) (Niobium)

OL'KHOVSKAYA, Gutya Shlemovna

Reactions of Tuberculosis in Children and Some Physio*Therapeutical
Influence

Dissertation for Medical Science degree. Chair of Pediatrics (lechfaka) (head,
Prof. P.A. Byreyev) Saratov Medical Institute, 1950

OL'KHOVSKAYA, G.S., kandidat meditsinskikh nauk; TRYNKIN, A.P., dotsent, di-rektor.

Heat regulation reflex in children with rheumatism. Vop.pediat. 21 no. 2:21-24 Mr-Ap '53. (MLRA 6:6)

1. Klinika detskikh boleszney lechebnogo fakul'teta Saratovskogo meditsin-skogo instituta. (Rheumatism) (Temperature, Animal and human)

TRYNKIN, A.P., dotsent; OL'KHOVSKAYA, G.S., kandidat meditsinskikh nauk

Nervous system function test in rheumatism in children. Pediatriia
no.5:28-32 S-O '54.
(MLRA 7:12)

1. Iz kafedry detskikh bolezney (zav. dotsent A.P.Bynkin) lechebnogo
fakul'teta Saratovskogo meditsinskogo instituta.
(RHEUMATISM, in infant and child,
nervous system funct. test in)
(NERVOUS SYSTEM, in various diseases,
rheum. in child.)

OLAHOVSKAYA, C.S.

TRYNKIN, A.P., dotsent; OL'AHOVSKAYA, O.S.

Studying cortical neurodynamics in children with rheumatic fever.
Pediatriia no.2:18-2° F '57.   (MIRA 10:19)

1. Iz kliniki detskikh boleznay (dir. - dotsent A.P.Trynkin)
lechebnogo fakul'teta Saratovskogo meditsinskogo instituta
       (RHEUMATIC FEVER)   (NERVOUS SYSTEM)

OL'KHOVSKAYA, I.G.

Structure of the cavity wall in pneumonectomised lungs [with summary French]. Probl.tub. 36 no.5:85-92 '58 : (MIRA 11:8)

1. Iz patologoanatomicheskogo otdeleniya (zav. - prof.B.P. Ugryumov) Moskovskogo nauchno-issledovatel'skogo instituta tuberkuleza Ministerstva zdravookhraneniya RSFSR (dir. V.F. Chernyshev, zamestitel' dir. po nauchnoy chasti - prof. D.D. Aseyev).
(TUBERCULOSIS, PULMONARY, pathology
cavity wall structure in surg. specimens (Rus))

CL'KHOVSKAYA, I. G.: Master Med Sci (diss) -- "Changes in the wall of a tuber-culous cavern with treatment by antibiotics and chemical preparations". Moscow, 1959. 12 pp (Acad Med Sci USSR) (KL, No 13,1959, 112)

GETMANSKAYA, Z.M.; OL'KHOVSKAYA, I.G.

Multiple aneuryams of the vessels of the basal portion of the
brain. Vop.neirokhir. 24 no.1:36-37 Ja-F '60.   (MIRA 13:10)
(INTRACRANIAL ANEURYSMS)

RYBAKOVA, N.I.; OL'KHOVSKAYA, I.G.

Clinical X-ray diagnosis of metastasis of cancer of the breast into
the lungs. Vop. onk. 11 no.6:21-27 '65.

(MIRA 18:8)

1. Iz Instituta eksperimental'noy i klinicheskoy onkologii AMN
SSSR (dir. - prof. N.N.Blokhin, zav. rentgenologicheskim otdelom -
prof. I.L.Tager, zav. otdelom patomorfologii - prof. N.A.Krayevskiy).

KRAYEVSKIY, N.A.; GLUKHOVSKAYA, I.G.; SOLOV'YEV, Yu.N. (Moskva)

Book reviews. Arkh. pat. 27 no.8:82-84 '65.

(MIRA 18:10)

1. Deystvitel'nyy chlen AMN SSSR (for Krayevskiy).

OL'Khovskaya, M, S.

SHCHERBA, M.L.; GUBAR', P.S.; OL'KHOVSKAYA, M.S. (Leningrad)

    Late results of antibiotic treatment in subacute septic endocarditis.
Klin.med. 35 no.5:19-24 My '57.   (MIRA 10:8)

    1. Iz kliniki gospital'noy terapii (nach. - prof. N.S.Molchanov)
Voyenno-meditsinskoy ordena Lenin a akademii imeni S.M.Kirova
        (ENDOCARDITIS, SUBACUTE BACTERIAL, ther.
           antibiotics, follow-up)
        (ANTIBIOTICS, ther. use
           endocarditis, subacute bacterial, follow-up)

OL'KHOVSKAYA-BURKOVA, A.K.

Species of leaf rollers injurious to fruit crops of the Ukraine.
Zool. zhur. 42 no.5:692-696 '63.   (MIRA 16:7)

1. Umanskiy sel'skokhozyaystvennyy institut.
                    (Ukraine--Leaf rollers)
                (Ukraine--Fruit--Diseases and pests)

OL'KHOVSKIY, A.A.

Requirements of a public inspector. Bezop.truda v prom. 5 no.3:31
Mr '61.   (MIRA 14:3)

1. Obshchestvennyy inspektor shakhty No.18-bis tresta Yemanzhelinugol'
Chelyabinskogo sovnarkhoza.
                        (Mine inspection)

S/716/61/018/000/010/019
D207/D301

AUTHORS: Fevraleva, N. Ye., Nepokrytyy, Ya. P. and Ol'khovskiy,
           B. P.

TITLE: Testing of complex-shaped magnets

SOURCE: Akademiya nauk Ukrayins'koyi RSR. Instytut elektrotekh-
           niky. Sbornik trudov, v. 18, 1961. Voprosy magnitnykh
           izmereniy, 84-89

TEXT: The authors studied hysteresis curves of permanent magnets
shaped like a horseshoe or a hollow cylinder. For the former, it
was found that reliable results (within 3%) can be obtained by
measurements in the neutral plane (middle of the magnet) on the
outer convex side of the horseshoe; elsewhere in the neutral plane
the measured magnetic properties were affected by the magnet poles.
For the cylindrical magnet an allowance has to be made for the flux
in air inside the magnet if the ratio S_2/S_1 is greater than 0.5;
here S_1 and S_2 are the total and the internal (air-filled) cross-

Card 1/2

OL'KHOVSKIY, B.R.

    Overall mechanization for working frozen ground at the Kemerovo
Transportation Road Project. Mekh. stroi. 21 no.3:10-12 Mr '64.
                                         (MIRA 17:3)

OL'KHOVSKIY, G.G.

MARIYEV, D.I., kand.tekhn.nauk; OL'KHOVSKIY, G.G., inzh.; YUSIM, V.I.,inzh.

Selecting a type of gas turbine power generator railroad car.
Elek.sta. 28 no.10:40-43 '57.   (MIRA 10:11)
                    (Electric generators)

OL'Khovskiy, G.G.

SOV/96-59-10-3/22

AUTHORS: Ol'khovskiy, G.G. (Engineer) and
             Shuvalov, G.I. (Cand. Tech. Sci.)

TITLE: Test Results on a Gas Turbine Type GT-12-3 Installed in
             the Shatskaya Station of Podzemgaz (Underground Gasification)

PERIODICAL: Teploenergetika, 1959, Nr 10, pp 17-22 (USSR)

ABSTRACT: The first Soviet tandem gas turbine of 12 MW, made by the
             Leningrad Metal Works, designed to operate on liquid fuel
             and gas from the underground gasification of Moscow Basin
             coal, was tested in February 1958. A schematic circuit
             diagram of the installation is given in Fig 1.   The
             commissioning of this set is considered to be an important
             stage in the development of Soviet gas turbines.
             Experience with tandem sets of this kind will provide a
             basis for the development of high-output gas turbines for
             power stations. Acceptance tests were carried out at no-
             load and at 4, 8 and 12 MW. The performance of the set is
             not yet fully up to the designer's expectations; it has
             not been run on its principal fuel, which is gas from the
             underground gasification of coal, and a number of design
             faults remain to be corrected. However, the experience so
Card 1/5   far gained enables the works to design and start
             manufacturing a 25 MW set and to commence the design of a

SOV/96-59-10-3/22

Test Results on a Gas Turbine Type GT-12-3 Installed in the Shatsk
Station of Podzemgaz (Underground Gasification)

100 MW set, which should be a serious competitor to steam
sets of comparable output. The places at which measure-
ments were made during the tests are indicated in the
schematic diagram of Fig 1; the instrumentation and
measurement procedures are described. Power and heat
balances derived from the test results are given in
Table 1 and show that the tests were accurate to within
1 or in some cases 2%. Graphs of efficiency, fuel
consumption and main temperatures as functions of load
are given in Fig 3. Graphs of pressures, consumption and
speed of the high-pressure turbine as functions of load
are in Fig 4. The graphs show that under all conditions
of loading the performance is very close to the design
requirements. The main test results, given in Table 2,
show that at a load of 11.4 MW the efficiency is only
23.4%, which is appreciably lower than the design figure
of 27%. This occurs because the degree of regeneration
is less than it should be; also there are considerable
air leakages at the glands and the compressor efficiencies
are somewhat low. When these defects have been corrected

Card 2/5

SOV/96-59-10-3/22

Test Results on a Gas Turbine Type GT-12-3 Installed in the Shatsh
Station of Podzemgaz (Underground Gasification)

the efficiency may be raised to 27% at an electrical load
of more than 13 MW. This set is of lower designed
efficiency than foreign sets of comparable output because
it contains a group of comparatively inefficient
centrifugal gas compressors and because the gas ducts are
long owing to the complicated layout of the machine and
regenerator. It will be seen from Fig 3 that the
efficiency at half load is three quarters of the maximum
efficiency and the fuel consumption at no-load is a third
of that at full load. The efficiencies of the high
pressure compressors are some 5-8% low because the air
that they receive from the coolers contains drops of
condensed water. In addition to affecting the thermo-
dynamic properties of the compressor, this moisture
promotes deposit formation on the blade. Methods of over-
coming this difficulty are suggested. When the machine
comes to work on gas, the compressors will not develop so
Card 3/5   high a pressure as when working on air, and will probably
deliver insufficient gas to the combustion chamber. It
is, therefore, necessary to increase the compression at
of the medium- and low-pressure groups of gas compressors.

SOV/96-59-10-3/22

Test Results on a Gas Turbine Type GT-12-3 Installed in the Shatsk
Station of Podzemgaz (Underground Gasification)

The air consumption at the glands is 7.3 tons per hour,
or 2.5% of the total air flow, which is much too big.
The heavy rigid construction of the turbine frame has
certain disadvantages, and in particular the set takes
about five hours to warm up, so that the starting time
cannot be reduced to 10-30 minutes as is common in foreign
practice. The casing takes much longer to heat up than
the shaft and rotor. Data are given about thermal
expansiion and temperature differences during starting.
During the tests the set ran on diesel fuel and the
combustion efficiency was high. However, there was a
certain amount of coke formation in the combustion chamber
and some pieces of coke were carried over into the
turbine. Moreover, the temperature distribution at the
turbine inlet was not uniform. The degree of regeneration
obtained during the tests was only 66.2% against a
designed figure of 80%, mainly because the air was not
sufficiently heated in the heaters. It is probable that
part of the heating gases by-pass the heating surface.
Card 4/5 The air and gas coolers operated satisfactorily.

SOV/96-59-10-3/22

Test Results on a Gas Turbine Type GT-12-3 Installed in the Shatsk
Station of Podzemgaz (Underground Gasification)

It is concluded that the set can now operate satisfac-
torily at full load on liquid fuel, though the efficiency
is not up to the design figure. This is a considerable
success for the Leningrad Metal Works but they still have
a good deal of work to do to achieve the designed
performance and to get the set running on its principal
fuel, gas.
There are 4 figures and 2 tables.

Card
5/5

ASSOCIATION: Vsesoyuznyy teplotekhnicheskiy institut
(All-Union Thermo-Technical Institute)

SOV/96-59-10-16/22

AUTHORS: Ol'khovskiy, G.G. and Starichenko, V.D. (Engineers)

TITLE: The Use of High-output Gas Turbines at Peak-load Power
             Stations

ABSTRACT: This is a general review of foreign practice in the use of
          gas turbines at peak-load power stations. It is concluded
          that gas turbines are widely used in this way in the USA,
          England, Italy, Germany and elsewhere. Gas turbines
          without regenerator, although of comparatively low
          efficiency (20-27%) and relatively low unit output
          (20-40 MW) are already the best prime movers for covering
          daily and seasonal peak loads with a total duration of
          2000-3000 hours per year, even in very large power systems.
          The advantages of gas turbines are that they are cheap,
          compact, simple and reliable in operation. They can be
          started up quickly and power stations may be made auto-
          matic so that staff requirements for operation and repair
          are small. There are 6 figures, 5 tables and 8 references,
Card 1/1   of which 5 are English, 2 German and 1 Soviet.

37998
S/096/62/000/005/005/009
E194/E454

AUTHORS: Ol'khovskiy, G.G., Engineer, Molodykh, N.I., Engineer

TITLE: An investigation of the operation of a group of air
            compressors forming part of a gas turbine set

PERIODICAL: Teploenergetika, no.5, 1962, 51-56

TEXT: The tests described in this article were made on a gas
turbine set type ГТ-12-3 ЛМЗ (GT-12-3 LMZ) with high, medium and
low pressure air compressors.   Tests were made under a wide range
of operating conditions, including those under which compressor
operation became unstable and most of the article comprises
extensive test data.   Recommendations made to avoid the risk of
surging of compressors in service include: when the load is
reduced recirculation in the low pressure air compressors should
be commenced in good time;   if the speed of the high pressure
turbine falls (for a given inlet temperature) the machine should be
inspected for fouling and cleaned if necessary;   the inlet
temperatures of intermediate pressure and high pressure air
compressors should be measured and kept to a minimum.   These
recommendations apply when conditions change relatively slowly.

Card 1/2

An investigation of the operation ...

S/096/62/000/005/005/009
E194/E454

Tests were also made with sudden changes brought about by rapid
alteration of fuel supply and of recirculation of the gas
compressors.   Such changes if made suddenly can sometimes cause
instability which they would not do if made gradually.
There are 6 figures and 5 tables.

ASSOCIATION: Vsesoyuznyy teplotekhnicheskiy institut
             (The All-Union Heat-Engineering Institute)

Card 2/2

S/096/63/000/001/001/006
E194/E155

AUTHOR: Ol'khovskiy, G.G., Engineer

TITLE: Influence of fuel type on the output and efficiency of
            gas turbines

PERIODICAL: Teploenergetika, no.1, 1963, 9-14

TEXT: When burning certain types of fuel-gas, such as
hydrogen or carbon monoxide, two molecules of gas react with one of
oxygen to produce two molecules of combustion products and not
three as is assumed in elementary gas-turbine theory, which also
does not allow for changes in the enthalpy of reaction with
temperature. Existing methods of analysing gas-turbine cycles with
allowance for these effects are cumbersome, inaccurate and other-
wise inadequate even for a simple gas-turbine cycle. It is
accordingly proposed to linearise the equations governing gas-
turbine operation conditions, by replacing differentials of
functions by their increments. This gives linear equations in the
following form:

$$K_1 \delta P_i + K_2 \delta T_i + K_3 \delta G_i + \cdots = 0,$$

Card 1/3

Influence of fuel type on the ...

S/096/63/000/001/001/006
E194/E155

where K_1, K_2, K_3 etc are numerical coefficients determined by the parameters of the initial conditions;

$$\delta p_i = \Delta p/p; \quad \delta T_i = \Delta T/T; \quad \delta G_i = \Delta G/G -$$

are relative changes in these parameters.

Changes in gas-turbine output and efficiency on changing the fuel type are determined by solving systems of these linear equations, some of which express the characteristics of individual components of the installation (compressors, turbines, heat exchangers) and others the relationships between these components in the particular turbine circuits. Some of the equations will contain free terms reflecting such properties of the working medium as the mean specific heat over the temperature range considered, or the isoentropic index. The equations are then formulated and are applied to a simple gas-turbine cycle without regeneration to show that when burning H_2 or CO the output and efficiency are 6 - 7% less than with liquid fuel or natural gas. In practice, conditions are still worse because compressors operate less efficiently on gas fuel than on air. To illustrate this, calculations are made for a

Card 2/3

OL'KHOVSKIY, G.G., inzh.

    Evaluation of the efficiency of regeneration in gas turbine systems.
    Teploenergetika 11 no.6:26-27 Je '64.   (MIRA 18:7)

    1. Vsescyuznyy teplotekhnicheskiy institut.

SHUVALOV, G.I., kand. tekhn. nauk; OL'KHOVSKII, G.G., insh.

Trends in the development of stationary gas turbine systems in
the U.S.S.R. Teploenergetika 11 no.9:2-6 S '64. (MIRA 17:9)

1. Vsesoyuznyy teplotekhnicheskiy institut.

OL'KHOVSKIY, G.G., kand. tekhn. nauk

Reduction of the results of the tests of gas turbine power
systems to predeterminate conditions. Teploenergetika 11
no.12:53-56 D '64   (MIRA 18:2)

1. Vsesoyuznyy teplotekhnicheskiy institut.

L 10552-66   EPA/EWP(f)/EPF(n)-2/T-2/ETC(m)   WW

ABSTRACT: The article considers complex gas turbine installations
consisting of a number of working elements: turbines, compressors,
combustion chambers, heat exchange equipment, regenerators, and air
coolers. General considerations are formulated, on the basis of which
it is possible to determine the accuracy required in measurement of in-
dividual parameters and, on the basis of practical experiments, to de-
termine the values of permissible measurement errors. After a mathemat-
ical and statistical development based on the heat and power balances of
the system, the article concludes with a table showing the maximum per-
missible deviations of the individual parameters from their average
values during the whole time of the experiment. These permissible devi-

Card   1/2   UDC: 621.438.621.3.088.3.001.5

L 10552-66

ACC NR: AP6000786

ations are as follows: electrical load, %--±2.5; fuel consumtion, liquid, %--±2.5; fuel consumption, gas, %--±4.0; heat of combustion, kcal/kg--±100; gas temperature before turbine, °C--±20; temperature of atmospheric air, °C--±1.5; temperature of cooling water, °C--±1.5; fuel temperature, °C--±10; barometric pressure, mbar--±0.5 moisture content of atmospheric air, gr/kg dry air--±5; and, rpm of generator, %--±1.5. If, in the course of the experiment, the variations of the individual parameters exceed the above limits, the duration of the experiment and the number of readings must be increased. Orig. art. has: 1 figure and 8 tables.

SUB CODE: 13/ SUBM DATE: 00   / ORIG REF: 002/ OTH REF: 000

Card   2/2 /w)

KHRISTICH, V.A., kand. tekhn. nauk; OL'KHOVSKIY, G.G.; CHERNIN, Yo.N., inzh.;
    BASHKATOV, Yu.N., inzh.; SHEVCHENKO, A.M., inzh.; TUMANOVSKIY, A.G.,
    inzh.; GORORETS, V.C., inzh.

Some results of the tests and adjustment of the combustion chambers
of the gt-25-700 and gtn-9-750 gas turbine power systems. Teploener-
getika 12 no.2:16-20 F '65.   (MIRA 18:3)

1. Vsesoyuznyy ordena Trudovogo Krasnogo Znameni teplotekhnicheskiy
institut imeni F.E. Dzerzhinskogo; Kiyevskiy politekhnicheskiy insti-
tut i Leningradskiy metallicheskiy zavod.

OL'KHOVSKIY, G.G., kand. tekhn. nauk

Heat tests of the GT-25-700-1 gas turbine system. Teploenergetika 12
no.5:16 -20, My '65.   (MIRA 18:5)

1. Vsesoyuznyy teplotekhnicheskiy institut.

ACC NR: AP6003741   EPA/EWP(f)/EPF(n)-2/T-2/ETC(m)   WW

AUTHOR: Ol'khovskiy, G.G.   (Engineer);   SOURCE CODE: UR/0104/65/000/004/0027/0032
(Engineer); Rachin, E.V.   (Engineer); Frenkel', L.D.   (Engineer); Bizyayev, Ye.V.

ORG: none

TITLE: First results of setting up and usage of the 25 Mw gas turbine system

SOURCE: Elektricheskiye stantsii, no. 4, 1965, 27-32

TOPIC TAGS: electric power engineering, gas turbine, electric power plant, electric
power production

ABSTRACT: A description of the type GS-25-700 gas turbine power system, and the
results of the starting-testing, and first usage periods of the system. The turbine
is fueled with natural gas, has a coefficient of fuel heat usage of 57% with the
regenerator disconnected. The turbine passed a period of setting up and test
usage of 2,200 hours. It was found to be simple in operation, its noise does not
exceed health norms. A power of 21.5 Mw at an efficiency of about 24% was attained.
The planned power was not attained, the efficiency of the turbine and compressor
was below plan, the resistance of some sections of the gas-air course and
expenditure of air for cooling and back compression exceeded plan. The main
difficulties in usage resulted from compressor contamination and deposition of
sediment in the air cooler tubes. It is hoped that further work will make the system
capable of attaining the design power with high reliability.

Card 1/2

HW)

UDC: 621.438

Card 2/2

ANDRYUSHCHENKO, Anatoliy Ivanovich; LAPSHOV, Vitaliy Nikolayevich;
LOZHKIN, A.N., prof., dokter tekhn. nauk, retsenzent;
OL'KHOVSKIY, G.G., red.

[Steam-gas systems of electric power plants; thermodynamic
and technical economic analysis of operating cycles and
thermal networks] Parogazovye ustanovki elektrostantsii;
termodinamicheskii i tekhniko-ekonomicheskii analizy tsiklov
i teplovykh skhem. Moskva, Energiia, 1965. 246 p.
(MIRA 18:3)

L 04739-66

ACC NR: AP6015526

SOURCE CODE: UR/0096/65/000/005/0016/0020

AUTHOR: Ol'khovskiy, G. G. (Candidate of technical sciences)

ORG: All-Union Institute of Thermal Engineering (Vsesoyuznyy teplotekhnicheskiy institut)

TITLE: Thermal tests of gas-turbine installation type GT-25-700-I LMZ

SOURCE: Teploenergetika, no. 5, 1965, 16-20

TOPIC TAGS: gas turbine, electric power plant/GT-25-700-I LMZ gas turbine

ABSTRACT: Thermal tests on the first prototype of a type GT-25-700-I LMZ gas-turbine installation after the first finishing stage are described. A capacity of 22 megawatts and an efficiency of 24% were obtained. Technical possibilities are indicated for raising these values to the calculated design values of 25 megawatts and 28% respectively. Orig. art. has: 4 figures and 2 tables. [JPRS]

SUB CODE: 10 / SUBM DATE: none / ORIG REF: 004

UDC: 621.438.001.4

Card 1/1

L 31978-66   EWP(f)/T-2   WW

ACC NR: AP6013386   (A,N)   SOURCE CODE: UR/0098/66/000/005/0013/0018

AUTHOR: Ol'khovskiy, G. G. (Candidate of technical sciences); Fridrikh, A. M. (Engineer)

ORG: All-Union Heat Technology Institute (Vsesoyuznyy teplotekhnicheskiy institut)

TITLE: Experimental investigation of start-up conditions for a Type GT-25 LMZ gas turbine installation

SOURCE: Teploenergetika, no. 5, 1966, 13-18

TOPIC TAGS: gas turbine engine, combustion gas dynamics, electric motor, combustion chamber, ignition /Type GT-25 LMZ gas turbine

ABSTRACT: The article presents the results of an experimental investigation of the operation of a single-shaft power gas turbine installation and a determination of the characteristics of the individual elements of the installation during start-up conditions. The shaft of the turbine group was initially set into rotation by use of a start-up non-synchronous electric motor with a phase rotor. After the motor was switched on, the turbine group rapidly accelerated to a rate of 900-1000 rev/min. The article gives a scheme of the apparatus. Results of a series of experiments are exhibited graphically. It was found that

UDC: 621.438.62-57.001.5

Card 1/2

L 31978-66

ACC NR: AP6013386

during the start-up the temperature in front of the turbine varied smoothly and did not exceed 650-600°C. It was found that the power of the start-up motor was sufficient to accelerate the rotation rate of the gas turbine installation up to 1000 rev min which is suitable for ignition of the combustion chamber. Ignition of the combustion chamber did not present difficulties; burning of the fuel was stable under all start-up conditions, without signs of vibration. The exhaust was light and clean. Considerable expenditures of external energy are necessary for acceleration up to a rate of 1500-1600 rev min. The efficiency of the compressors under all conditions was 80-85%, that is, sufficiently high. The efficiency of the turbine was 80-85%. It was found that the coordination of the individual stages and the heat losses during the heating up of the turbine had only a slight effect on its efficiency.
Orig. art. has: 7 figures.

SUB CODE: 21/ SUBM DATE: none/ ORIG REF: 006

Card 2/2 IC

L 40204-66   EWT(d)/EWP(c)/EWP(v)/T/EWP(k)/EWP(1)   IJP(c)   RH
ACC NR: AP6030053   SOURCE CODE: UR/0114/66/000/004/0002/0003

AUTHOR: Polishchuk, V. L. (Engineer); Orlov, M. D. (Engineer); Chernin, Ye. N. (Engineer); Reznichenko, V. Ya. (Engineer); Kotov, Yu. V. (Engineer); Bodrov, I. C. (Engineer); Yamalutdinov, I. T. (Engineer); Ol'khovskiy, G. G. (Candidate of technical sciences)

ORG: none

TITLE: Results of testing first model and series examples of gas turbines GTN-9-750 of Leningrad Metallurgical Plant im. XXII CPSU Congress

SOURCE: Energomashinostroyeniye, no. 4, 1966, 2-8

TOPIC TAGS: gas turbine, pipeline, centrifugal pump, electric power production, turbine design, turbine compressor/GTN-9-750 gas turbine, NG-280-9 centrifugal pump

ABSTRACT: A description of the testing of the 9000 kw GTN-9-750 gas turbine, designed to drive the NG-280-9 centrifugal pipeline pump, used on the Bukhara-Ural gas pipeline. The tests showed that the actual power produced in operating conditions is 8,750 kw, efficiency 25%. The maximal power produced without additional equipment and regenerators is 9600-10,000 kw. The characteristics of the main elements of the turbine were found to be near the design characteristics: the adiabatic efficiency of the compressor is 89%, the low and high pressure turbine sections operate at 85% and 89-90% efficiency. Long-term testing with repeated stops and starts showed that the unit as modified from the prototype is suitable for operation in the gas pipeline system. Orig. art. has: 5 figures, 7 formulas and 3 tables.
[JPRS: 36,501]

SUB CODE: 13, 10 / SUBM DATE: none / ORIG REF: 002

UDC: 621.438.001.41

Card 1/1

ACC NR: AP6015714   (A,N)   SOURCE CODE: UR/0413/66/000/009/0126/0126

INVENTOR: Ol'khovskiy, G. G.; Fridrikh, A. M.

ORG: None

TITLE: Gas turbine unit. Class 46, No. 181449 [announced by the All-Union Heat Engineering Scientific Research Institute im. F. E. Dzerzhinskiy (Vsesoyuznyy teplotekhnicheskiy nauchno-issledovatel'skiy institut)]

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 9, 1966, 126

TOPIC TAGS: gas turbine engine, engine auxiliary equipment, engine compressor system, engine control system

ABSTRACT: This Author's Certificate introduces a gas turbine unit which contains an antistall line for permitting the passage of compressed air from the compressor into the gas-air duct preceding the compressor or following the turbine. The available energy of the flowing air is used by equipping the antistall line with injection and ejection units at the intake of the gas-air duct.

SUB CODE: 21/ SUBM DATE: 08Dec64

Card 1/1   UDC; 621.438

OL'KHOVSKIY, I.A.; GOLOV, V.K.; BAS'YAS, I.P., redaktor; KEL'NIK, V.P.,
redaktor izdatel'stva; KOVALENKO, N.I., tekhnicheskiy redaktor.

[Advanced experience in producing cast steel products; experience
of the Novo-Tagil refractory plant] Peredovoi opyt proizvodstva
staleraxlivochnykh izdelii; opyt novatorov N.-Tabil'skogo ogneupor-
nogo zavoda. Sverdlovsk, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi
i tsvetnoi metallurgii, 1954. 59 p.   (MLRA 7:11)
          (Powder metallurgy)

OL'KHOVSKIY, I.A.; PANASENKO, D.S.

Ladle brick production from Kumak deposit clays. Ognsupory 20 no.7:
298-302 '55.   (MIRA 9:1)

1.Ural'skoye otdeleniye instituta ognsuporov (for Ol'khovskiy).
2.Ognsupornyy tsekh Orsko-Khalilovskogo metallurgicheskogo kombinata
(for Panasenko).
                (Firebrick) (Kumak--Fire clay)

OL'KHOVSKIY, I.A.; D'YACHKOVA, Z.S.; SHVARTSMAN, I.Sh.; PROKOP'YEVA, A.M.;
RUBSHTEYN, Ya.I.

Increasing the stability of stoppers for pouring electrical steel.
Ogneupory 22 no.11:520-523 '57.   (MIRA 11:1)

1. Ural'skoye otdeleniye Leningradskogo instituta ogneuporov (for
Ol'khovskiy, D'yachkova, Shvartsman). 2. Verkh-Isetskiy metallur-
gicheskiy zavod (for Prokop'yeva, Rubshteyn).
                              (Refractory materials)
                    (Smelting--Equipment and supplies)

AUTHORS: Ol'khovskiy, I. A., Ignatova, T. S.   SOV/131-58-8-7/3

TITLE: Experimental Production of Fireclay-less
             Semi-Acid Products Made From Primary Kaolin Found at
             Chikmakul'sk and Semi-Acid Clay Found at Nizhne-Uvel'sk
             (Opyty proizvodstva besshamotnykh polukislykh izdeliy iz
             chikmakul'skogo pervichnogo kaolina i nizhne-uvel'skoy
             polukisloy gliny)

PERIODICAL: Ogneupory, 1958, Nr 8, pp 345-351 (USSR)

ABSTRACT: The following persons took part in these experiments: 1) of
             the Metallurgical Kombinat Nizhniy Tagil (Nizhne-Tagil'skiy
             metallurgicheskiy kombinat): N. F. Lesnyak, V. S. Turchaninov,
             P. T. Timchenko, Kh. M. Papakin, V. V. Klopov, L. P. Siyalova;
             2) of the Ural Department of the Leningrad Refractories Insti-
             tute (Ural'skoye otdeleniye Leningradskogo instituta ogne-
             uporov): I. Sh. Shvartsman, V. G. Fl . . . , N. I. Bobrov (Ref 1).
             The chemical composition of kaolin expressed in %: SiO₂-72,4;
             Al₂O₃-26,4; Fe₂O₃-0,4; CaO-0,2; MgO-0,3, burning loss 8,2, re-
             fractoriness 1730°. The mineralogical composition of kaolin is
Card 1/4   given in table 1. Particular investigations were carried

SOV/131-58-8-2/12

Experimental Production of Fireclay-less Semi-Acid Products Made From Primary Kaolin Found at Chikmakul'sk and Semi-Acid Clay Found at Nizhne-Uvel'sk

out in the laboratory of the VNIIO by P. D. Pyatikop as well as by N. V. Gul'ko (Ref 2). The thermal analysis of kaolin (Fig 1) shows 2 effects: the endothermal effect at 580° and the exothermal effect at 1025°. On the curve of continuous shrinkage (Fig 2) an elongation of the sample may be observed up to 500°, after which it shrinks until a temperature of 1350° is attained. The linear shrinkage as well as the absorption of water by the burned kaolin samples are shown by table 2. Table 3 shows the chemical composition and the refractoriness of the semi-acid clays found at Nizhne-Uvel'sk; figure 3 shows the thermogram and figure 4 the curve of continuous shrinkage. The linear shrinkage and the absorption of water by the samples are shown in table 4. Furthermore, the production of kaolin and clay samples is discussed. The composition of mass and the properties of the burned samples are given by table 5. Table 6 shows the properties of samples which are produced from masses having different moisture contents and produced under different pressures. The Refractories Department of the Metallurgical Kombinat of Nizhniy-Tagil pro-

Card 2/4

SOV/131-58-8-2/12

Experimental Production of Fireclay-less Semi-Acid Products Made From Primary Kaolin Found at Chikmakul'sk and Semi-Acid Clay Found at Nizhne-Uvel'sk

duced a quantity of bricks containing no fireclay by means of the semi-dry pressing method. The chemical composition and refractoriness of the kaolin and clay of experimental material are given in table 7. The technological scheme of this material may be seen from figure 5. Furthermore, the production of this test quantity is described in detail. The bricks were dried for 32 hours in a tunnel-drying-plant at temperatures of 75 - 127° and were burned in a round kiln at 1400° for 41 hours. The physical and mechanical properties of these fireclay-less products are given by table 8. The bricks were then subjected to a practical test in the metallurgical furnace of the Kombinat (Table 9). The petrographical investigation of the worked bricks was then carried out by the petrographical expert of the Ural Department of the Leningrad Refractories Institute, T. P. Baychenko (Ref 3).

Conclusions: 1) Experiments showed that fireclay-less products may be made from these raw materials. 2) It was found that they are equivalent to fireclay products. 3) The manufacture of these products may be described as economical. 4) Experiments

Card 3/4

SOV/131-58-8-2/12

Experimental Production of Fireclay-less Semi-Acid Pro-
ducts Made from Primary Kaolin Found at Chikmakul'sk and Semi-Acid Clay
Found at Nizhne-Uvel'sk

                    are intended to be continued on a large industrial scale.
                    There are 5 figures, 9 tables, and 8 references, 8 of which
                    are Soviet.

ASSOCIATION: Ural'skoye otdeleniye Leningradskogo instituta ogneuporov
                (Ural Department of the Leningrad Institute of Refractories)

Card 4/4

15(6)   SOV/131-58-11-2-4
AUTHORS: Ol'khovskiy, I. A., Shvartsman, I. Sh.

TITLE: Experiments for the Increase of Heat Stability of Siphon Bricks
               (Opyty povysheniya termicheskoy stoykosti sifonnogo kirpicha)

PERIODICAL: Ogneupory, 1958, Nr 11, pp 498-504 (USSR)

ABSTRACT: It is often observed that in siphon casting of steel the siphon
               bricks burst, which causes loss of metal. It was assumed that
               this happens because of the ferrostatic pressure of the metal.
               In order to check this assumption, a device was developed by
               I. P. Bas'yas and T. F. Shutenko (Ref 1) to determine the tear-
               ing strength of siphon bricks. It was discovered that ferro-
               static pressure during the casting process is much lower in the
               bricks (1,5-2kg/sq.cm) than their tearing strength (34 kg/sq.cm).
               Tests of heat stability according to the method of the Lenin-
               gradskiy institut ogneuporov (Leningrad Institute of Refractory
               Materials)showed that in these tests siphon bricks burst in the same
               way as in steel casting. Tests with pre-heated bricks (see
               table) did not yield any positive results either. A. V. Azbukin
               and T. N. Bushuyeva took part in the experiments. Shvartsman
Card 1/3   suggested to produce siphon bricks in two layers by means of a

SOV/131-58-11-3/9

Experiments for the Increase of Heat Stability of Siphon Bricks

nozzle (Figs 2 and 3). A comparison of nozzle sizes for regular and two-layer siphon bricks can be seen in table 1. In the Department of Refractory Products of the NTMK two experimental series of two-layer siphon bricks were produced whose physico-mechanical properties did not differ from those produced in the traditional way. V. S. Turchaninov, Kh. M. Papakin, N. D. Gan, and L. P. Siyalova took part in the production of these experimental series (Ref 4). One series of bricks had an interstitial space of 0,82 mm and the other of 0,60 mm (Fig 4). The heat stabilities of two-layer and traditional siphon bricks are given in table 2. The nature of the cracks after tests according to the method of the Leningrad Institute of Refractory **Materials** is shown in figures 5, 6, and 7. As can be seen in table 3, the majority of the two-layer bricks were not cracked all the way through. In figures 8 and 9 regular and two-layer siphon bricks are shown after the casting of liquid cast-iron, demonstrating that two-layer bricks, in spite of bursting on the surface, were impermeable to the metal, as the inner layer was not damaged. Conclusions: siphon bricks possess sufficient strength for withstanding the ferro-static pressure in steel casting; the

Card 2/3

SOV/131-58-11-3/9

Experiments for the Increase of Heat Stability of Siphon Bricks

cause of bursting of siphon bricks is their insufficient heat
stability; a considerable increase of heat stability can be
obtained by producing two-layer siphon bricks. There are 9
figures, 3 tables, and 3 references,   which are Soviet.

ASSOCIATION: Ural'skoye otdeleniye Leningradskogo instituta ogneuporov
(Ural Department of the Leningrad Institute of Refractory
Products)

Card 3/3

15(2)
AUTHORS: Ol'khovskiy, I. A., Diyesperova, M. I.   SOV/131-59-6-5/15

TITLE: Investigation of the Influence of Ladle Bricks on the
              Impurity of Steel, Carried out by Means of the Isotope Ca^{45}
              (Izucheniye s pomoshch'yu izotopa Ca^{45} vliyaniya kovshevogo
              kirpicha na zagryazneniye stali)

PERIODICAL: Ogneupory, 1959, Nr 6, pp 258-262 (USSR)

ABSTRACT: Collaborators of the NTMK, of the Nizhne-Serginskiy Works,
              and of the Ural'skiy institut metallov (Ural Institute for
              Metals) M. I. Tsekhanskiy, N. I. Shishkina, K. B. Khusnoyarov,
              G. D. Susloparov and M. S. Mikhalev took part in this
              investigation (footnote). Opinions differ however, as far as
              the amount of non-metallic inclusions are concerned which
              are brought into the steel by the ladle lining. Grigoryan
              and Samarin speak of 17.9% of the total amount of inclusions,
              while Karachentseva estimates them to 1.6%. The influence
              of the ladle bricks on the impurity of steel was examined
              by means of isotopes which were inserted into the chamotte
              when the bricks were produced. The ladle bricks KP-3 and
Card 1/2   KP-4 with radioactive isotopes Ca^{45} were pressed according

Investigation of the Influence of Ladle Bricks on the   SOV/131-59-6-5/15

Impurity of Steel, Carried out by Means of the Isotope Ca^{45}

to the semidry method. The display of the isotope is shown
by a curve in figure 1. Measurements were taken by means of
the radiometrical unit B-2 with the frontal gasmeter MST-17.
The activity of the mass is given in table 1. Furthermore
the values of the chamotte products are given. Figure 2
represents a radiograph showing the cross section of a ladle
brick. The influence of ladle bricks on the impurity of
boiling steel G-18 was examined with a casting ladle having
a capacity of 65 t, and a block weight of 500 - 520 kg. In
addition, the influenc. of siphon bricks was examined. The
amount of radioactive inclusions in the slag (Table 2), and
in the products (Table 3) is shown. As can be seen from them,
the percentage of steel impurity caused by ladle bricks, is
only small. Finally the necessity of further investigations
in this field is pointed out. There are 4 figures, 3 tables,
and 6 Soviet references.

ASSOCIATION: Vostochnyy nauchno-issledovatel'skiy i proyektnyy institut
ogneupornoy promyshlennosti (Eastern Scientific Research
and Design Institute of the Industry for Refractories)

Card 2/2

S/131/60/000/05/03/016
B015/B011

AUTHORS: Ol'khovskiy, I. A., Shvartsman, I. Sh., Diyesperova, M. I.

TITLE: Experiments of Producing and Utilizing Unburned Fire-clay
                Products From Ural Raw Materials

PERIODICAL: Ogneupory, 1960, No. 5, pp. 207-213

TEXT: On the basis of techniques worked out by the Vostochnyy institut og-
neuporov (East Institute of Refractories), the department of refractories of
the Nizhne-Tagil'skiy metallurgicheskiy kombinat (NTMK) (Nizhniy Tagil
Metallurgical Kombinat) produced sample sets of unburned fire-clay and fire-
clay-quartz products by the half-drying method. The following persons took
part in this work: V. S. Turchaninov, Kh. M. Papakin, P. T. Timchenko,
V. V. Klopov, V. K. Golov (Deceased), Zh. A. Vydrina, N. A. Novoselov, P. P.
Borodin, V. G. Flyagin. The binding part of the layer consisted of a mixture
of belkinskaya and nizhneuvel'skaya clay types. The products were dried at
200-220°. Table 1 shows the properties of unburned products tested in the
furnaces of the Nizhniy Tagil Metallurgical Kombinat. Table 2 shows results

Card 1/2

KRYAZHEV, G.S.; OL'KHOVSKIY, G.P.; KONOVALOV, B.T.

Regularities in the distribution of mineralization in the
Buron ore field. Izv. vys. ucheb. zav.; tsvet. met. 4 no.5:
15-23 '61.   (MIRA 14:10)

1. Severokavkazskiy gornometallurgicheskiy institut, kafedra
poleznykh iskopayemykh i poiskovo-razvedochnogo dela.
            (Buron region--Ore deposits)
                (Geology, Structural)

OL'KHOVSKIY, I.A., inzh.

Damage and incomplete switching operation of VMG-133 oil cutouts.
Prom. energ. 17 no.9:22-23 S '62.   (MIRA 15:8)
                                    (Electric cutouts)
                (Electric power distribution--Equipment and supplies)

ACCESSION NR: AP4013188

AUTHORS: Ol'khovskiy, I. A.; Sartakov, Yu. A.

TITLE: Rice husk as a burning admixture in the production of light refractories

SOURCE: Ogneupory*, no. 2, 1964, 89-92

TOPIC TAGS: refractory material, light weight refractory, burning admixture, rice husk admixture, lignin admixture, anthracite admixture, coke admixture, rice husk, lignin, anthracite, coke, ChPK1 clay, BL-1.0 light refractory, LT1 clay, LT2 clay, rice husk burning capacity, rice husk ash, BL-1.3 refractory

ABSTRACT: The authors present the results of a study of rice husk qualities and the possibility of its use in the production of light refractories. Rice husk characteristics are compared to those of sawdust, lignin, anthracite, and coke used for the same purpose. The experiments showed that the use of husk without a preliminary processing produced poor results. Therefore, the husk was ground to the following fractional composition: 33% of 2.5-1 mm; 32.5% of 1.0-0.4 mm; 15.5% of 0.4-0.25 mm; 19% smaller than 0.25 mm. The positive features of rice husk were its low moisture absorption, good grindability, and high ash content (it

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ACCESSION NR: AP4013188

was possible to use this ash instead of fire clay). Clay ChPK1 and lignin served as raw material in the experiments. An attempt was made to produce the light weight refractories by the method of plastic semi-dry pressing with subsequent baking. It was established that according to their burning capacity the materials tested can be arranged in the following declining order: sawdust, rice husk, lignin. The weight loss in the samples containing rice husk was considerably larger than that in samples containing sawdust and lignin. Orig. art. has: 5 tables and 3 figures.

ASSOCIATION: Krasnodarskiy filial NIIMontazhspets'troy (Krasnodar Branch of NIIMontazhspets'stroy)

SUBMITTED: 00

SUB CODE: ML

DATE ACQ: 02Mar64

NO REF SOV: 001

ENCL: 00

OTHER: 001

Card 2/2

OSTROVSKIY, I., Inzh. (Chelyabe)

Case of chamber-type pumping station. Gidr. i mel. 16
no.5:40-41 My '64.
(MIRA 17:6)

OL'KHOVSKIY, I.A.; ZVEREV, V.S.; KRINICHANSKAYA, L.A.; Prinimali uchastiye:
BUHIM, L.L.; TAINKIN, A.S.; RUDNITSKIY, B.I.

Increasing the resistance of firebox hearths in steam boilers
with liquid slag removal. Cgneupory 30 no.12:16-19 '65.
                                              (MIRA 18:12)

1. Krasnodarskiy filial Nauchno-issledovatel'skogo instituta po
montazhnym i spetsial'nym stroitel'nym rabotam (for Ol'khovskiy,
Zverev, Krinichanskaya).

OLKHOVSKIY, I. I.

"The Role of Different Moments of Distribution Function and the Influence of Boundaries on Translational Dispersion of Sound Velocity in Monatomic Gases."

paper presented at the 4th All-Union Conf. on Acoustics, Moscow, 26 May - 2 Jun 58.

10(2)—10.4000   SOV/155-58-4-24/34

AUTHOR: Ol'khovskiy, I.I.

TITLE: On Onedimensional Equations of Generalized Hydrodynamics
               (Ob odnomernykh uravneniyakh obobshchennoy gidrodinamiki)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye
               nauki, 1958, Nr 4, pp 143 - 148 (USSR)

ABSTRACT: The present paper completes the publication $\boxed{\text{Ref 2}}$ of the
               author. He sets up the onedimensional equations of generalized
               hydrodynamics (see $\boxed{\text{Ref 2}}$) under consideration of the im-
               pulse- and energy transfer of the relative motion. The equations
               generalize the 13-moments-approximation of H. Grad $\boxed{\text{Ref 1}}$.
               The author thanks N.N. Bogolyubov, Member of Academy for dis-
               cussions. - There are 4 references, 1 of which is Soviet,
               1 French, and 2 English.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova
               (Moscow State University imeni M.V. Lomonosov)

SUBMITTED: May 30, 1958

Card 1/1

24(7) 24, 1800   SOV/155-58-4-30/34

AUTHOR: Ol'khovskiy, I.I.

TITLE: On the Relaying Dispersion of Ultrasonics in Monoatomic
            Gases (O translyatsionnoy dispersii ul'trazvuka v odnoatomnykh
            gazakh)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Fiziko-matematicheskiye
            nauki, 1958, Nr 4, pp 181 - 190 (USSR)

ABSTRACT: The author gave a report on the contents of the present paper
            at the IV-th All-Union Conference for Acoustics on May 28,1958.
            Up to now in the investigation of the relaying   dispersion
            of sound waves the consideration restricts itself to the case

            $\varepsilon = \nu \frac{\mu}{p} \ll 1$, where p is the gas pressure, μ the viscosity,

            ν the acoustic frequency. The author uses the equations of
            generalized hydrodynamics set up by him (see [Ref 9]), in order
            to investigate in the present paper the case :

            $\nu \frac{\mu}{p} \ll 1$ as well as the case $\nu \frac{\mu}{p} \gtrsim 1$. He sets up generalized

            acoustic equations and the corresponding dispersion relations.

Card 1/2

On the Relaying   Dispersion of Ultrasonics in   SOV/155-58-4-30/34
Monoatomic Gases

In the case $\varepsilon \ll 1$ the solutions are given with the exact-
ness up to ε^2 , in the case $\varepsilon \gtrsim 1$ they are numerically
calculated. In the limit case $\varepsilon \to 0$ one obtains classical re-
sults. The 4, 5 and 6 - moment approximations give a qualita-
tively other picture than in the paper of Chapman, the
solution is finite for the whole ε -interval, there are no
increasing solutions. In the domain $\varepsilon \gtrsim 1$ under constant
pressure and temperature the frequency enlargement leads to
certain boundary values for velocity and damping. The formulas
show good coincidence with the experiment. The author thanks
N.N. Bogolyubov, Academician, for discussions.
There are 2 figures, 3 tables, and 11 references, 4 of which
are Soviet, 6 American, and 1 German.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova
(Moscow State University imeni M.V. Lomonosov)
SUBMITTED: May 30, 1958

Card 2/2

10(4)

AUTHOR: Ol'khovskiy, I. I.   SOV/20-123-2-14/50

TITLE: On a Boundary Problem of Generalized Hydrodynamics
            (O granichnoy zadache obobshchennoy gidrodinamiki)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 2, pp 262-265
            (USSR)

ABSTRACT: The present paper intends to formulate the boundary conditions
            of generalized hydrodynamics for a heat-conducting boundary
            moving in a nonuniform manner; special attention is paid to
            onedimensional linear problems. A certain element of the
            boundary surface is assumed to move with the velocity $\vec{u}_n(t)$.
            The following further assumptions are made: The parts of the
            gas atoms falling upon this surface element is diffusely re-
            flected by it, and part $(1-s)$ is reflected mirror-like. The
            diffusely reflected gas atoms in this case satisfy Maxwell's
            (Maksvell) velocity distribution (with respect to the velocity
            of the surface element). The corresponding boundary condition
            is explicitly written down; in the case of an immobile boun-
            dary, it goes over into Maxwell's condition. As all particles
            of gas impinging upon the wall are immediately reflected, there is
Card 1/2   no flow of gas particles passing through this wall. The

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calculation process is followed step by step. The boundary condition thus obtained is the kinetic boundary condition for a heat-conducting boundary accomodation moving in a nonuniform manner. The author then investigates such conditions as were imposed upon the hydrodynamic quantities by the aforementioned relation. After several steps the boundary condition of generalized hydrodynamics for onedimensional problems is obtained. Finally, some linear boundary conditions for one-dimensional flows are derived; the boundary conditions concerned are those of generalized acoustics for onedimensional problems. The author thanks N. N. Bogolyubov, Academician, for discussing the results. There are 4 references, 1 of which is Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
              (Moscow State University imeni M. V. Lomonosov)

PRESENTED: June 30, 1958, by N. N. Bogolyubov, Academician

SUBMITTED: June 23, 1958
Card 2/2

SOV/2o-123-5-14/5o

10(2)
AUTHOR: Ol'khovskiy, I. I.

TITLE: On a Linear Boundary Problem of Generalized Hydrodynamics
             (Ob odnoy lineynoy granichnoy zadache obobshchennoy gidro-
             dinamiki)

PERIODICAL: Doklady Akademii nauk SSSR, 1958, Vol 123, Nr 5, pp 821-824
             (USSR)

ABSTRACT: This paper deals with the solution of the simplest boundary
             problem of generalized hydrodynamics which is the acoustic
             part of the theory of the ultrasonic interferometer. The
             author investigates the following scheme of the interferometer:
             There are 2 infinite parallel planes which reflect the gas
             atoms like a mirror and which do not conduct heat. Between
             these planes, there is a monoatomic gas and the radiating
             plane x = 0 oscillates according to a harmonic law of
             infinitely small amplitude, the plane x = a does not move.
             In this case, the behavior of the gas is described by linear
             homogeneous equations of generalized hydrodynamics. For the
             sake of simplicity, these equations are investigated with
             an exactness up to the moments of second order, i.e. the effects

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On a Linear Boundary Problem of Generalized Hydrodynamics

of heat conduction in the gas are neglected. The initial equations of this problem are

$$\frac{\partial n'}{\partial t} + (c_e)_0 \frac{\partial u'}{\partial x} = 0; \quad \frac{\partial u'}{\partial t} + (c_e)_c \frac{\partial P'_{11}}{\partial x} = 0;$$

$$\frac{\partial P'}{\partial t} + \frac{5}{3}(c_e)_0 \frac{\partial u'}{\partial x} = 0; \quad \frac{\partial P'_{11}}{\partial t} + 3(c_e)_0 \frac{\partial u'}{\partial x} = \frac{6}{\tau}(P' - P'_{11}).$$

It holds that $n' = \Delta n/n_0$; $u' = \Delta u/(c_e)_0$; $P'_{11} = \Delta P_{11}/P_0$;

$P' = \Delta P/P_0$; $(c_e)_0 = \sqrt{kT_0/m}$. (The quantities with the index o correspond to the steady state, but the quantities of the type Δn correspond to the deviations from the steady state). n denotes the number of the particles, u - the average velocity of the gas particles, P_{11} - a component of the stress tensor, τ - a time of the order of magnitude of re-

Card 2/4   laxation time. Finally, it holds that $P = (1/3)\sum_i P_{ii}$. The

On a Linear Boundary Problem of Generalized Hydrodynamics

boundary conditions are given and the solution of the above
system is sought as

$$n' = \text{Re} \left[e^{i\omega t} n'(x) \right] , \quad u' = \text{Re} \left[e^{i\omega t} u'(x) \right] , \quad P = \text{Re} \left[e^{i\omega t} P'(x) \right] ,$$

$P'_{11} = \text{Re} \left[e^{i\omega t} P'_{11}(x) \right]$. The operations are discussed step
by step and the expressions for the solution of the boundary
problem are given explicitly. The usual conclusions from
adiabaticity apply also in the present case. In contrast to
usual acoustics, $\Delta P_{11} \neq \Delta P$ (in the general case). The
expression for ΔP_{11} (but not for ΔP !) gives the excess
pressure (with respect to steady pressure) in the direction
perpendicular to the boundary surfaces. An expression for
ΔP_{11} is given in the form of J. C. Hubbard (Khabbard). The
main result of this paper is the decrease of the damping of
ultrasound for $1 > r \rightarrow 0$. The results of this paper are
based on the kinetic equation of Boltzmann (Bol'tsman) for
monoatomic gases. The author thanks Academician N. N. Bogolyubov

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SOV/2o-123-5-14/5o

On a Linear Boundary Problem of Generalized Hydrodynamics

> for his useful discussion of this paper. There are 1 table
> and 8 references, 2 of which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

PRESENTED: July 22, 1958, by N. N. Bogolyubov, Academician

SUBMITTED: July 17, 1958

Card 4/4

AUTHOR: Ol'khovskiy, I. I.

TITLE: On a Method of Moment-approximation in Generalized Hydrodyna-
             mics (O metode momentnykh priblizheniy v obobshchennoy gidro-
             dinamike)

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 4,
             pp 748 - 751 (USSR)

ABSTRACT: In the introduction to the present paper it is said that in
             the Boltzmann equation the limits of the quantity $\varepsilon = \Delta t_p / \Delta t$
             are not taken into account and that in a number of papers
             the cases $\varepsilon \ll 1$ and $\varepsilon \gg 1$ were investigated (Refs 1-4). Here,
             the solution of the Boltzmann equation is given without any
             limitation with respect to ε . The distribution function is
             represented as a threedimensional Hermitian polynomial (1),
             and further the system of equations (2) developed in one of the
             author's earlier papers (Ref 2) is mentioned, which was ob-
             tained from the Boltzmann equation. If (1) is introduced into
             (2), the system of equations of general hydrodynamics is ob-
             tained. In part 2 the main properties of the system of equations
Card 1/3   (2) are discussed, and in part 3 a solution of (2) is suggested,

On a Method of Moment-approximation in Generalized   SOV/20-126-4-16/62
Hydrodynamics

in which the moments of higher degree are neglected. In this
way a system of equations of first, second, third approximation
is obtained, from which, by summation with respect to the
quantities P_{ii}, the equations for the conservation of the ener-
gy of the various approximations are obtained. Finally, it is
found that for the case $\xi \ll 1$ the solutions of (2) furnish
known results. For arbitrary values of ξ some approximation
methods are then mentioned, and in conclusion it is said that
from the here obtained equations (5), (6), and (7) the solution
of the boundary problem of generalized hydrodynamics is possible.
The author thanks N. N. Bogolyubov for his advice and for
discussing the results obtained. There are 7 references, 4 of
which are Soviet.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
(Moscow State University imeni M. V. Lomonosov)

Card 2/3

On a Method of Moment-approximation in Generalized   SOV/2o-126-4-16/62
Hydrodynamics

PRESENTED: February 25, 1959, by N. N. Bogolyubov, Academician

SUBMITTED: February 5, 1959

Card 3/3

USSR/Cultivated Plants. Fruits. Berries.   M

Abs Jour: Ref Zhur-Biol., No 5, 1958, 20504.

Author : M.K. Ol'khovskiy
Inst   : Not given.
Title : The Best Strawberry Varieties. (Luchshiye sorta zemlyan-
         iki).

Orig Pub: Kolgospnik Ukraini, 1956, No 12, 34.

Abstract: On the variety testing plots at Luganskoye and Zhitomir
         in Zhitomirskaya Oblast', at Kiev and Skvira in Kiyevs-
         kaya Oblast' and at Vozdvizhensk in Sumskaya Oblast',
         a study of strawberry varieties was made. Of the 9 stan-
         dard varieties high productivity was shown by the Culver
         Mysovka, and at the Kiev and Luganskoye plots by the
         Koralka. Among the new varieties, one found the high
         yielding varieties to be the Korallovaya 100, Korallo-

Card   : 1/2

USSR/Cultivated Plants. Fruits. Berries.   H

Abs Jour : Ref Zhur-Biol., No 15, 1958, 68361

Author   : Konstantinov, P. K., Ol'khovskiy, M. K.
Inst   : -
Title   : The Best Strawberry Strains in Polesia and
           in the Ukrainian Wooded Steppe Zones.

Orig Pub : Sad i ogorod, 1957, No 2, 50-52

Abstract : The Culver strawberry strain occupies first
           place in terms of yields, fruit size, and
           taste qualities. The Koralka strain occupies
           second place, and constitutes the most valuable
           preserving kind. In Lugansk, Zhitomir, and Sumy
           Oblast's, the Mysovka strain is outstanding in
           terms of yields. Kiev Early No 2 is the ear-
           liest-ripening strain. It ripens 7-8 days ear-
           lier than the Roshchinskaya strain. In 1955,

Card   : 1/2

DONTSOV, P. F., OL'KHOVSKIY, N. V.

Mbr., Gor'kiy Milling Machine Plant (-1945-)

"High-Speed Milling," Stanki i Insstrument, 16, Nos. 7-8, 1945

BR-52059019

OL'KHOVSKIY, N. V.

"Planing instead of Scraping" Stanki I Instrument, 17, No. 9, 1946

BR-52059019

Ol'khovskiy, N. V.

USSR/Miscellaneous - Industrial processes

Card 1/1   Pub. 103 - 4/22

Authors   : Berdnikov, B. A., and Ol'khovskiy, N. V.

Title   : To increase the stability of cutting movements on metal-cutting machines

Periodical : Stan. i instr. 12, 12-15, Dec 1954

Abstract   : Various measures for the elimination of torsional vibrations and for increasing the stability of cutting movements on metal cutting machines are introduced. The reasons for the origination of torsional vibrations of machine spindles are explained. Table; graphs; drawing.

Institution : ....

Submitted   : ....

OL'KHOVSKIY N.V.

USSR/ Engineering - Machine construction

Card 1/1   Pub. 103 - 9/19

Authors   : Khitrun, N. M., and Ol'khovskiy, N. V.

Title   : Hole boring with automatic change of mandrels

Periodical : Stan. i instr. 2, 28 - 30, Feb 1955

Abstract   : The construction of a new, special turret-type boring-lathe model 1c33
             is announced. The mechanical characteristics and mode of operation of
             the new automatic boring machine are described. Because of the mechanized
             process of mandrel changing the lathe offers maximum reduction in labor
             efforts connected with the charging of the tool and mechanism changes.
             Diagrams; illustration.

Institution: .....

Submitted: .....

OL'KHOVSKIY, N.V.; VOLKOV, S.I.

Electric upsetting of billets. Stan.i instr. 30 no.3:28-30 Mr '59.
(MIRA 12:3)

(Forging)

ANUFRIYEV, V.A.; KHITRUN, N.M.; OL'KHOVSKIY, N.V.; BOLOTIN, A.I.,
        inzh., retsenzent; VLADIMIROV, V.N., inzh., red.

[Large-lot production of milling machines] Krupnoseriinoe
proizvodstvo frezernykh stankov. Moskva, Mashinostroenie,
1965. 206 p.
                                        (MIRA 18:4)

OL'KHOVSKII, V.M.

Method of sampling to determine the amount of tare in beets.
Sakh.prom. 29 no.6:8-9 '55.   (MLRA 9:1)

1.Sadovskiy sakharnyy zavod.
                    (Sugar beets)

ANDREYEV, G.S., kand. tekhn. nauk; BOKUCHAVA, G.V., kand. tekhn. nauk, dots.; BRAKHMAN, L.A., inzh.; BUDNIKOVA, A.V., inzh.; GORDON, M.B., kand. tekhn. nauk, dots.; ZHAVORONKOV, V.H., inzh.; KARZHAVINA, T.V., kand. tekhn. nauk; KOROTKOVA, V.G., inzh.; KORCHAK, S.N., inzh.; KLUSHIN, M.I., kand. tekhn. nauk, dots.; KUZNETSOV, A.P., kand. tekhn. nauk, dots.; KURAKIN, A.V., inzh.; LATYSHEV, V.N., inzh.; OL'KHOVSKIY, V.N., inzh.; ORLOV, B.M., kand. tekhn. nauk, dots.; OSHER, R.N., inzh.; PODGORKOV, V.V., inzh.; ; SIL'VESTROV, V.D., kand. tekhn. nauk [deceased]; TIKHONOV, V.M., inzh.; TROITSKAYA, D.N., inzh.; KHRUL'KOV, V.A., inzh.; LESNICHENKO, I.I., red. izd-va; SOKOLOVA, T.F., tekhn. red.; GORDEYEVA, L.P., tekhn. red.

[Lubricating and cooling fluids and their use in cutting metals]
Smazochno-okhlazhdaiushchie zhidkosti pri rezanii metallov i
tekhnika ikh primeneniia. Moskva, Gos. nauchno-tekhn. izd-vo
mashinostroit. lit-ry, 1961. 291 p.   (MIRA 15:1)
             (Metalworking lubricants)

BELOZEROV, V.G., (Kursk, ul. Engel'sa d.136, kv.27); SKVORTSOV, B.A. (Leningrad, ul. Soyuza pechatnikov, d.7.kv.26); PARKHOMCHUK, Ya. (Leningrad, ul. Soyuza pechatnikov, d.7.kv.26); TRAUBE, Ye.S.(Donetsk, 5, ul. Shchorsa, d.12. kv.8); DROZDOV, A.D. (Novocherkassk, ul. B.Khmel'nitskogo d.151. kv.26); VAYNBERG, A.M. (Moskva, V-180, Malaya Yakimanka, d.22, kv.19); FILATOV, M.A. (Kemerovo, ul. Dzerzhinskogo d.27, kv.11); GANZBURG, L.B. (Leningrad P-3, Krasnosel'skaya, d.12, kv.2); BUDANOV, V.D. (Moskva, A-287, Chuksin tupik, d.4, kv.17); LYSENKO, N.G. (Kiyev, ul. Sulimov-skaya, d.5.kv.71); SHERGIN, Ye.N. (Cherkassy, ul Uritskogo, d.37,kv.6); TRUSHCHEV, Ye.A.; SUVOROV, Yu.I. (Riga, ul. Suvorova, d.20, kv.11); ARTAMONOV, I.G. (Riga, ul. Suvorova, d.20, kv.11); OKHAPKIN, V.V. (Yaroslavl', Tutayevskoye shosse, d.32); OL'KHOVSKIY, I.L. (Khar'kov, pr. Moskovskiy, d.199)

Discoveries and inventions. Prom.energ. 19 no.7:55-56   Jl '64.
(MIRA 18:1)

1. Bereznikovskiy sodovyy zavod, byuro po ratsionalizatsii i izobretatel'stvu, Permskaya obl., g. Berezniki (for Trushchev).
2. Yaroslavl', Tutayevskoye shosse, d.32, YaZMOGK (for Okhapkin).
3. Khar'kov, pr.Moskovskiy, d.199, Khar'kovskiy elektromekhani-cheskiy zavod, byuro po ratsionalizatsii i izobretatel'stvu (for Ol'khovskiy).

OL'KHOVSKIY, V. Ye

551.46:656.61

7.4-11

[Dremliug, Valentin Valentinovich and Ol'khovskii, Vladimir Evgen'svich, Okeanografia na sluzhbe sovremennogo sudovozhdeniia. [Oceanography in the service of contemporary ship navigation] Leningrad, Gos. Izdat Vodnogo Transporta, Leningradskoe Otd-nie, 1954. 155 + 5 p. 43 figs, 17 tables, bibliog p. (157) DLC—A moderately technical account of the application of oceanography to various practical problems of marine navigation. The first chapter details the history of navigation and oceanography in the Soviet Union from the early beginnings of Russian seafarers in the 8th century A.D., the development of navigation schools by PETER I and the early beginnings of oceanographic studies by BERING, LOMONOSOV to the contemporary research of SHOTEISIN ZUBOV, etc. the various contributions of Russian oceanographers are listed briefly. The subsequent chapters are concerned with the following subjects: the problem of navigation on currents including a discussion of the origin of currents, their navigational classification, determination of velocities and directions of wind currents during navigation in an open sea and near coasts, the development of navigational aids in currents, the variation of sea level and its significance in navigation with special reference to the flood and ebb-tide oscillations of sea level, etc., the importance of wave investigations to ship navigation and the construction of sea ports; influence of hydrological factors upon the propagation of sound in seas and oceans, and sea ice and navigation within ice fields and icebergs. The text is accompanied by relevant equations, tabular data and numerous diagrams Illustrations. Subject Headings 1. Oceanography 2. Marine navigation.— I.L.D

(1)

AKHLYNOV, I.Ya.; BASALAYEV, V.N.; DANILENKO, O.T.; ZAKHAROV, A.D.;
    OL'KHOVSKIY, V.Ye.; YAKOVLEV, V.I.; KUZ'MINA, V.S., red.

[Manual for navigators of fishing fleets; navigation of
fishing boats and sea fishery practices] Spravochnik du-
dovoditelia rybolovnogo flota; promyslovaia navigatsiia
i morskaia promyslovaia praktika. Moskva, Pishchevaia
promyshlennost', 1965. 194 p.   (MIRA 18:9)

1. Glavnoye upravleniye rybnoy promyshlennosti Azovo-
Chernomorskogo basseyna (for Basalayev). 2. Polyarnyy
nauchno-issledovatel'skiy institut rybnogo khozyaystva i
okeanografii (for Danilenko). 3. Murmanskoye vyssheye more-
khodnoye uchilishche (for Yakovlev). 4. Gosudarstvennaya
inspektsiya bezopasnosti moreplavaniya i portovogo nadzora
flota rybnoy promyshlennosti SSSR (for Zakharov).

OL'KHOVSKIY, Vladimir Yevgen'yevich; YUSHCHENKO, A.P., redaktor; ANAN'IN,
    V.I., redaktor izdatel'stva; TIKHONOVA, Ye.A., tekhnicheskiy
    redaktor

[Determining a ship's position by means of radio; problems in
navigation] Opredelenie mesta sudna pri pomoshchi radiotekhniche-
skikh sredstv; voprosy navigatsii. Moskva, Izd-vo "Morskoi transport,"
                                                        (MLRA 9:9)
1956. 119 p.
        (Radio in navigation)

BOGDASHIN, A.S.; BOGORODSKIY, A.A.; VINGARDT, N.B.; GORBUNOV, V.I.;
GORBUNOV, V.R.; DUROV, V.K.; YERMAKOV, A.L.; IVANOV, A.A.;
KARAKOVA, N.I.; KOBYLYAKOV, L.M.; KOZLOVSKIY, N.I.; MARAKHTANOV,
K.P.; MIRUMYAN, G.N.; NECHAYTOV, G.P.; NOVIKOV, A.G.; OL'KHOVSKIY,
K.I.; PESTRYAKOV, A.I.; POLAPANOV, A.V.; SKLYAREVSKAYA, Ye.Kh.;
SOLDATENKOV, S.I.; SOROKIN, Ye.M.; TRUSHINA, Z.V.; FEDOROV, P.F.;
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OREKHOV, A.D., spotsred.; DEYEVA, V.M., tekhn.red.

[Handbook on new agricultural machinery] Spravochnik po novoi
tekhnike v sel'skom khoziaistve. Moskva, Gos.izd-vo sel'khoz.
lit-ry, 1959. 364 p.   (MIRA 13:2)
          (Agricultural machinery)

BURAVTSEV, Nikolay Vasil'yevich; VLADIMIRSKIY, Grigoriy Alekseyevich;
GORDON, Vladimir Osipovich; OL'KHOVSKIY, Leonid Andreyevich;
RODIONOVA, Z.A., red.; KORNEYEVA, V.I., takhn. red.

[Mechanical drawing; manual for students of pedagogical
institutes] Cherchenie; posobie dlia studentov pedagogiche-
skikh institutov. Izd.2., perer. [By] N.V.Buravtsev i dr.
Moskva, Uchpedgiz, 1963. 399 p.   (MIRA 17:1)

OL'KHOVSKIY, L.G. [Ol'khovs'kyi, L.H.], nauchnyy sotrudnik

Deep furrow openers for fertilizer placement. Mekh. sil'. hosp.
12 no. 3:20-22 Mr '61. (MIRA 14:4)

1. Umanskiy sel'skokhozyaystvennyy institut.
(Fertilizer spreaders)

83823

S/190/60/002/005/013/015
B004/B067

15.8108 also 2209

AUTHORS: Kozlov, P. V., Makaruk, L., Fomin, V. N., Ol'khovskiy.
              V. I. * OL'KOVSKIY, V. I. (miRA ...)
              15

TITLE: Studies in the Field of Polycarbonates. I. Effect of the
              Molecular Weight on the Transition Temperatures of Poly-
              carbonates

PERIODICAL: Vysokomolekulyarnyye soyedineniya, 1960, Vol. 2. No. 5,
              pp. 770-777

TEXT: The authors wanted to study the influence exerted by the molecular
weight on the thermomechanical properties and the transition temperatures
of polycarbonates. The polymers obtained by V. N. Kotrelev at the
Nauchno-issledovatel'skiy institut plastmass, Moskva (Scientific Research
Institute of Plastics, Moscow) by phosgenating 2,2-bis-(4'-oxyphenyl)pro-
pane in homogeneous and heterogeneous media were used. They were dissolved
in methyl chloride and fractionally precipitated by means of methanol.
Fig. 1 shows the intrinsic viscosity as a function of the concentration
for polymers with molecular weights of 20,000 and 235,000. As is shown

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Studies in the Field of Polycarbonates. I.
Effect of the Molecular Weight on the
Transition Temperatures of Polycarbonates

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B004/B067

by Fig. 2, polymers synthesized in a heterogeneous medium have an anomalous
distribution of molecular weights. The thermomechanical properties and the
transition temperatures were studied for fractions with molecular weights
of from 5,000 to 220,000 (Figs. 3-5, Table). The low-molecular fractions
showed no softening point but passed directly from the vitreous into the
viscous state. After crystallization, their transition temperature was
70°C higher. In polymers with higher molecular weight and a polymerization
degree of 40, the chains became flexible on heating. These products became
highly elastic. A further temperature increase, however, led to hardening
as a result of crystallization (Fig. 6). In low-molecular polymers it
occurred at lower temperatures than in high-molecular ones. The polymers
having the highest molecular weight showed the typical behavior of
amorphous polymers. According to their molecular weight, polycarbonates
have the properties of both crystallizing and amorphous polymers. As to
the flexibility of the chains, they hold an intermediate position between
polyisobutylene and polyvinyl chloride, although polycarbonate products
are characterized by <u>high strength</u> and hardness. This contradiction is
explained by a specific steric structure of the large polycarbonate

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Studies in the Field of Polycarbonates. I.   S/190/60/002/005/013/015
Effect of the Molecular Weight on the   B004/B067
Transition Temperatures of Polycarbonates

molecules, by strong intermolecular interaction, and by the assumption
of secondary structural formations in polycarbonate products. The
authors thank V. A. Kargin for a discussion. There are 6 figures, 1 table,
and 18 references: 8 Soviet, 2 US, 1 British, and 5 German.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova
               (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: February 2, 1960

Card 3/3

KOZLOV, P.V.; MAKARUK, L.; FOMIN, V.N.; OL'KOVSKIY, V.I.

Polycarbonates. Part 1: Effect of molecular weight on the transition
temperatures of polycarbonates. Vysokom.soed. 2 no.5:770-777 My
'60.   (MIRA 13:8)

1. Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova.
                    (Carbonates)